

An Overview of the Threatened Herpetofauna of South Asia



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BIODIVERSITY AND BIOGEOGRAPHY OF THE HERPETOFAUNA OF SOUTHERN ASIA

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Known variously as the Indian subcontinent, Indo-Pakistan Subcontinent and South Asia, the Subcontinent is home to one of tropical Asia's areas of greatest biodiversity. The region includes the countries next to, or in the proximity of, the Indian Ocean, including Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The formidable geographic barriers that impede faunal movement into or out of the area, including oceans, mountains and flood plains, justify the recognition of the region as a distinct biogeographic unit (cf. Ripley and Beehler 1990).

South Asia is exceptionally diverse in amphibians (263 described species; Appendix I) and reptiles (669 described species; Appendix II). The high taxon richness figures following from the large area (covering circa 4.36 million sq km) and the location at the crossroads of two distinctive biogeographic realms (the Palaearctic and the Oriental). With over 900 known species of amphibians and reptiles, south Asia has much greater species diversity than much larger areas such as China (including Hong Kong and Taiwan), with 661 species (Zhao and Adler, 1993), North America North of the Rio Grande River, with 496 species (Collins, 1990) or Europe East of the Ural Mountains, with 187 species (W. Böhme in Zhao and Adler, 1993). The fauna of the Indian region is thus comparable to several tropical countries in the Indo-Pacific and Neotropical regions, such as Indonesia, with a similar figure, 870 species; Australia, with 883 species; Colombia, with 790 species; and Brazil, with 983 species (Mittermeier *et al.*, 1992).

The 263 species of amphibians now known from South Asia belong to 10 families and 44 genera. The fauna is speciose in species of the Families Bufonidae (30 species), Ranidae (101 species) and Rhacophoridae (65 species). Endemicity is high: 168 species are restricted to one of the ten physiographic zones, and 28 species occurring in more than one zone but not extraliminally (*i.e.*, outside the South Asian region). The total number of genera restricted to the region is 12, of which three (*Indotyphlus*, *Melanobatrachus* and *Pterorana*) are monotypic. As expected, more endemic species are found in areas of high species diversity, although species rich north-eastern India has a lower rate of endemicity than either the Western Ghats and Sri Lanka, possibly as it abuts tropical forests of Yunnan and Myanmar.